RANDALL N. HYER
CEO

June 2023

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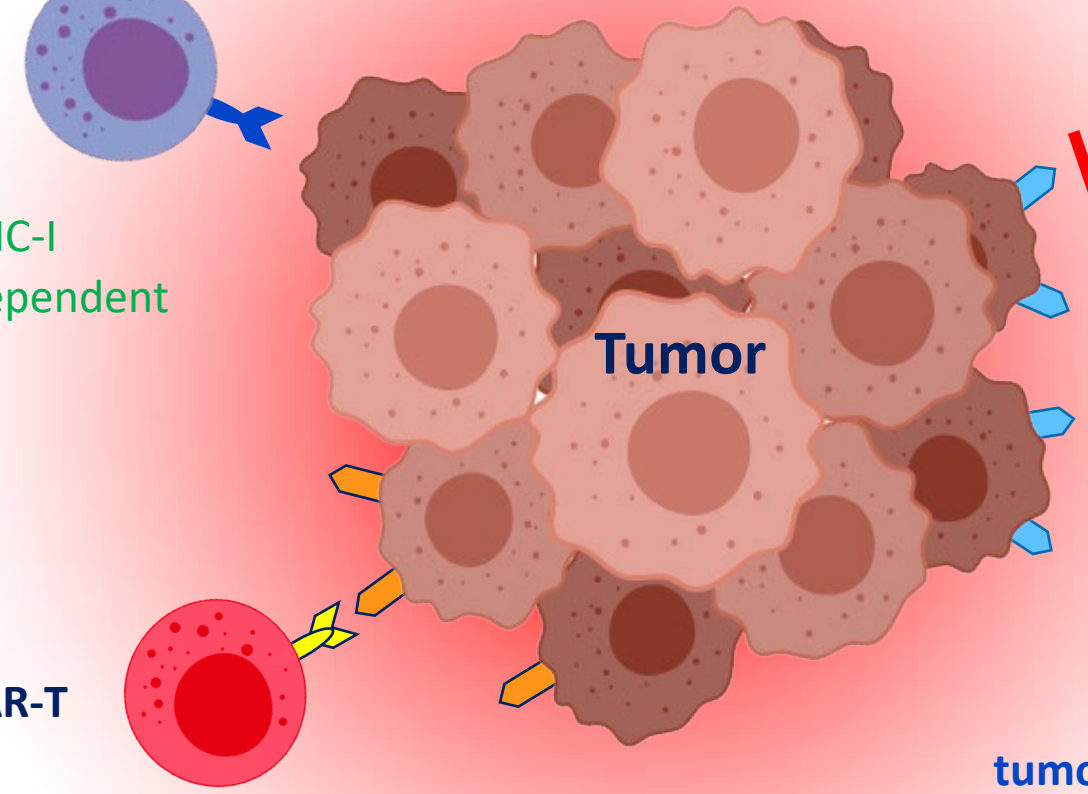
MER-101 (USP6) ACTIVATES SEVERAL IMMUNO-STIMULATORY PATHWAYS



Immune Escape

- Increases surface MHC-I
- Engages antigen-independent cytolytic lineages (Natural Killer (NK))

T cells cannot enter tumor

Induce chemokines to drive immune infiltration

Cancer cells create immunosuppressive tumor microenvironment (TME)

Create a "hot" TME

[IFNg signature + CXCL10 + $CD8^+$ T cells]

Responsive to Immune checkpoint Inhibitors (ICIs)

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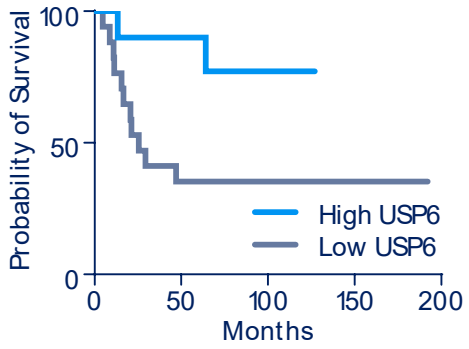
EPIDEMIOLOGICAL DATA VALIDATES USP6 AS A UNIQUE IMMUNOTHERAPY TARGET

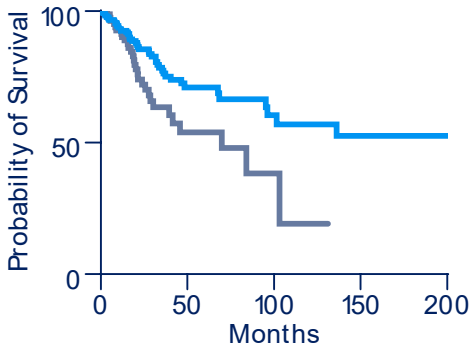
USP6

Real world expression data

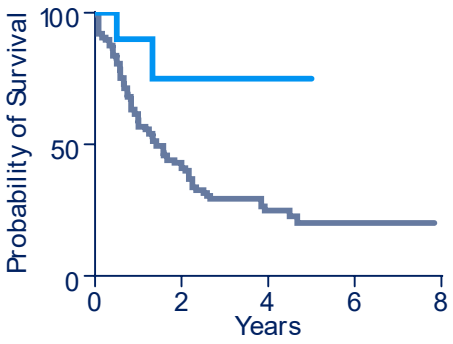
Ewing sarcoma:



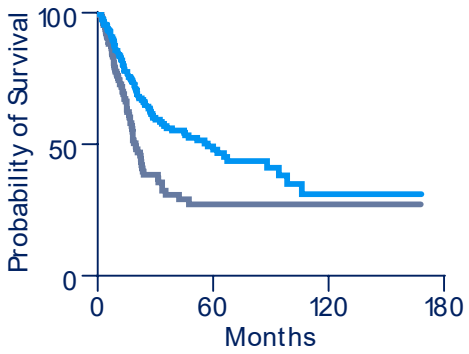
Cervical cancer:



Acute myeloid leukemia (AML):



Bladder cancer:



WHY USP6?

Elevated USP6 tumor expression is beneficial for patients

Correlates with enhanced immune activation and improved outcomes

Unique, multi-pronged mechanism of action

Activation of multiple immunostimulatory pathways reduces likelihood of resistance

Novel target, first-in-class therapy

Only company seeking to exploit USP6's powerful anti-tumor activity

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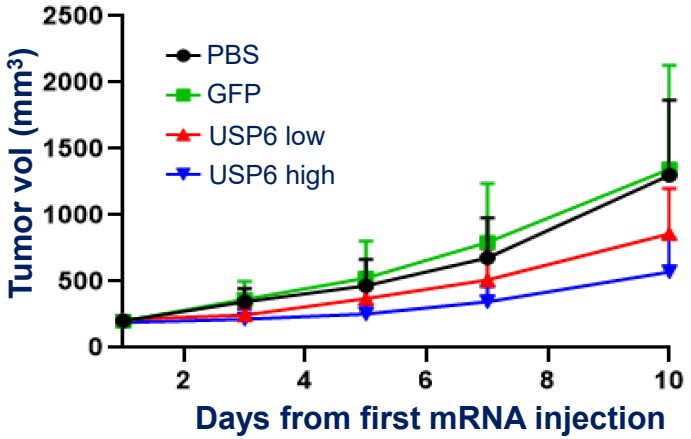
Proof of principle

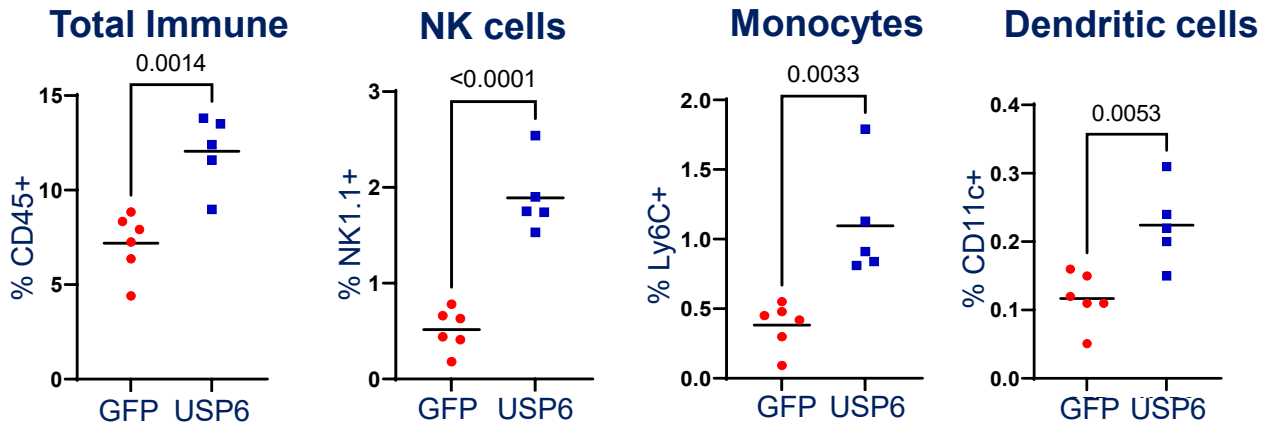
Intratumoral USP6 mRNA suppresses Ewing sarcoma tumorigenesis and triggers intratumoral and systemic immune activation

USP6 mRNA
Lipid nanoparticles (LNPs)

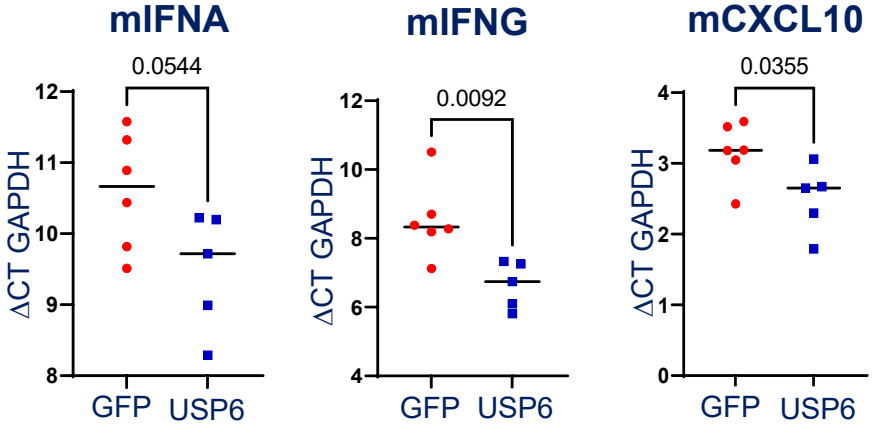
Intratumoral delivery



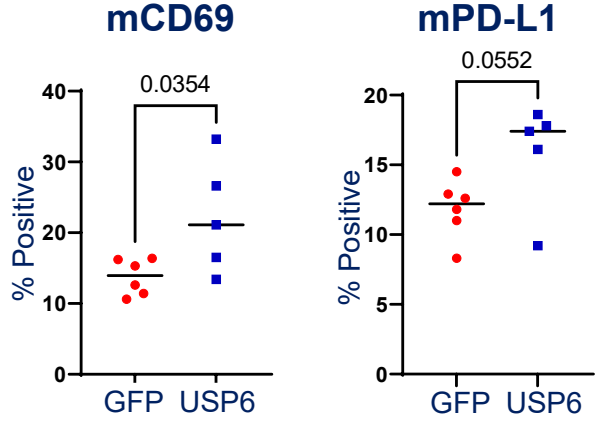
Intratumoral immune infiltration



Intratumoral immune activation



Systemic (splenic) NK activation



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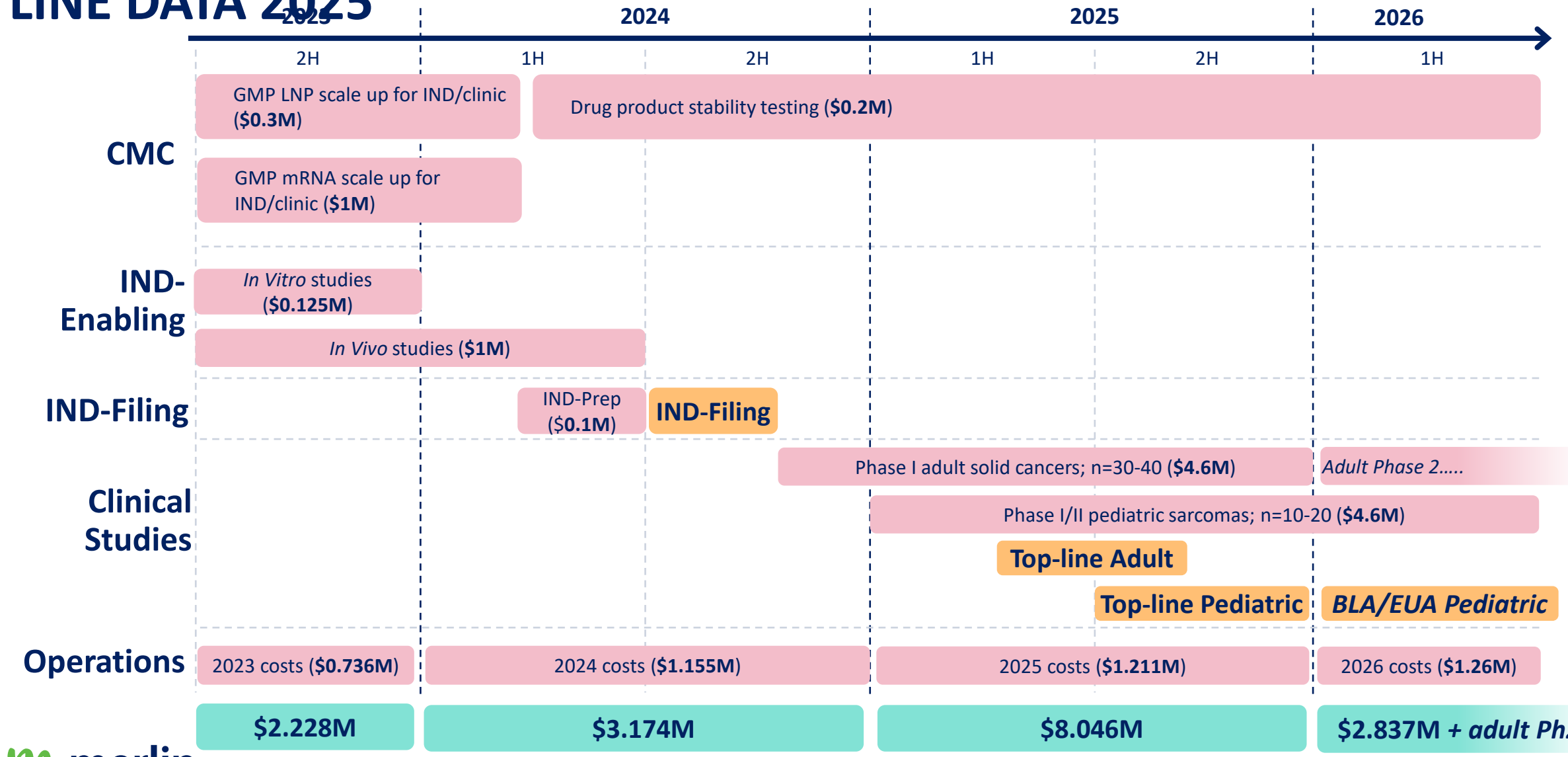
FDA GUIDANCE ENABLES CLINICAL ENTRY IN 2024 WITH TOP LINE DATA 2025

MER-101



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MER-101 HAS LARGE MARKET SIZE DRIVEN BY POTENTIAL APPLICATION TO NUMEROUS CANCERS AND EXPANSION OPPORTUNITIES

US Revenue Model*

	2030	2034
Solid Tumor Market	130,000,000,000	199,000,000,000
Immunotherapy Capture	63,000,000,000	95,000,000,000
	9,400,000,000	14,300,000,000
Est. VA Price/Cycle	15,500	18,100
Cycles/Yearly	668,000	869,000
Market Capture	1%	5%
Yearly Revenue	**$103,000,000**	**$787,000,000**

5 year cumulative

$2,069,287,658

Upside opportunities

- Market penetration
- COGS reduction
- Pricing
- Tier increase

MER-101 broad immuno-modulator:

- Numerous potential indications.
- Expansion to adjuvant/neo-adjuvant.
- Expansion to combination with other immunotherapies.

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*Detailed calculations provided in appendix

INVESTMENT SUMMARY

Lead Asset MER-101:

- **Novel, 1st-in-class** cancer immunotherapy with **exclusive IP in major world-wide markets**.
- **Demonstrated efficacy** in multiple mouse models with **supporting human epidemiological survival data**.
- Data supports **cancer agnostic indication** with an adult injectable tumor market conservative initial 5-year sales cumulative estimate at **~$2 billion.**
- Development in pediatric sarcomas can **expedite approvals with a Ph1/2 readout in 2026 H1** with eligibility for a **~$100M+ priority review voucher.**

Financials and timeline:

Current Funding

$650K
Pennsylvania state grant
(Non-dilutive)

$105K
SAFE Notes

Seeking

Tranche of $20M

$5M
to advance MER-101 to IND
(target 2024 H1)

$15M
to generate MER-101 Phase 1/2 data
(target: 2026 H1)

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